

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

APELDYN CORPORATION,

Plaintiff,

v.

AU OPTRONICS CORPORATION, et al.,

Defendants.

Civil Action No. 08-568-SLR

REDACTED VERSION

**PLAINTIFF APELDYN CORPORATION'S ANSWERING BRIEF IN OPPOSITION TO
DEFENDANTS AU OPTRONICS CORPORATION AND
AU OPTRONICS CORPORATION AMERICA'S *DAUBERT* MOTION
REGARDING ALLAN R. KMETZ, D.ENG.**

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Plaintiff Apeldyn Corporation (“Apeldyn”) hereby opposes Defendants AU Optronics Corporation and AU Optronics Corporation America’s (collectively, “AUO”) *Daubert* Motion Regarding Allan R. Kmetz, D.Eng. (D.I. 534; D.I. 535). Dr. Kmetz is a leader in the field of liquid crystal displays (“LCD”) with over 40 years of experience researching, developing, and evaluating LCD technology. (Ex. A ¶¶ 5-10 & Ex. 1 thereto.¹) He has served as president of the prestigious Society for Information Display, holds 16 U.S. patents and 47 foreign patents, and has authored numerous technical papers in various reviewed journals dealing with liquid crystal displays. (Ex. A ¶¶ 5-6 & Ex. 1 thereto.) He has further served as an expert in a number of cases involving LCD technology, including cases in this Court, and his reports have never been stricken in whole or in part. In this case alone, Dr. Kmetz has served 5 detailed expert reports totaling over 750 pages, and his infringement conclusions are based on thorough and technically sound testing techniques. (*See, e.g.*, Ex. A; Ex. B; Ex. C.)

AUO has no basis for challenging any aspect of Dr. Kmetz’s reports or testimony, and its seven-page Motion is without merit. Indeed, AUO does not actually dispute Dr. Kmetz’s expertise or the reliability of his testing methods,² but instead offers arguments that merely disagree with his conclusions. Such arguments, however, plainly are not proper grounds for a *Daubert* inquiry. Moreover, AUO’s assertions ignore fundamental scientific principles and grossly oversimplify the complex technical issues in the case. It is telling that *none* of AUO’s arguments was ever raised in the rebuttal reports of its own expert witness, Dr. Pochi Yeh,³ and

¹ All citations to exhibits herein are to those attached to the Declaration of Claire M. Maddox, filed contemporaneously herewith.

² AUO does not dispute that Dr. Kmetz is qualified or that his testimony meets the “fit” requirement under Federal Rule of Evidence 702.

³ Dr. Yeh is an expert for both AUO and co-defendant Chi Mei Optoelectronics (“CMO”) on the issue of infringement.

in fact, its arguments are belied not only by those reports and Dr. Yeh's testimony, but also by testing data that AUO inexplicably concealed from Apeldyn throughout expert discovery. Accordingly, Apeldyn respectfully requests that this Court deny AUO's Motion.

I. NATURE AND STAGE OF THE PROCEEDINGS

This is a patent infringement suit in which Apeldyn has alleged that AUO infringes U.S. Patent No. 5,347,382 ("the '382 patent"). Fact and expert discovery have closed. The Court will hear oral argument on claim construction and summary judgment motions on September 2, 2011. (D.I. 477; D.I. 502.) The final pretrial conference will be held on November 16, 2011, and the jury trial starts December 5, 2011. (D.I. 477.)

II. SUMMARY OF THE ARGUMENT

1. Nowhere is the weakness of AUO's Motion more evident than in the fact that AUO does not actually dispute Dr. Kmetz's expertise or the reliability of his methodology. Nor could AUO reasonably do so, as the method used by Dr. Kmetz is consistent with published industry practice, with which AUO's own expert Dr. Yeh agrees, and is even consistent with Dr. Yeh's own methodology. Moreover, AUO's Motion ignores the fact that nowhere in his rebuttal reports on infringement did Dr. Yeh take issue with Dr. Kmetz's underlying methodology. AUO's Motion should be denied on this ground alone.

2. AUO's "single axis," "single voltage," and "photographs are inadequate" arguments merely disagree with Dr. Kmetz's infringement conclusions drawn from his testing. Such arguments, however, cannot support a *Daubert* motion. Moreover, the arguments are contrary to fundamental science and common sense. Indeed, it is telling that in pursuing its Motion AUO must resort to attorney arguments that are not supported by even its own expert, whose reports actually support Dr. Kmetz's conclusions.

3. Dr. Kmetz may properly offer supporting background information regarding

AUO's infringing activities, which are relevant to secondary considerations and to show that AUO has sold and marketed the accused products in the United States. AUO's argument to the contrary ignores the nature and purpose of Dr. Kmetz's testimony, as well as fundamental rules of evidence.

III. ARGUMENT

A. Legal Standard

The "exclusion of critical evidence is considered an extreme sanction, not normally to be imposed absent a showing of willful deception or flagrant disregard of a court order by the proponent of the evidence." *Dow Chem. Co. v. Nova Chem. Corp.*, Civ. A. No. 05-737, 2010 WL 2044931, at *1 (D. Del. May 20, 2010) (Faman, J.) (internal quotation marks omitted). Indeed, the evidentiary rules themselves "embody a strong preference for admitting any evidence that may assist the trier of fact." *Pineda v. Ford Motor Co.*, 520 F.3d 237, 243 (3d Cir. 2008).

In keeping with the spirit of the rules, "Rule 702, which governs the admissibility of expert testimony, has a liberal policy of admissibility." *Id.* (internal quotation marks omitted). The admissibility of expert testimony under Rule 702 is governed by "three major requirements: (1) the proffered witness must be an expert, i.e., must be qualified; (2) the expert must testify about matters requiring scientific, technical or specialized knowledge; and (3) the expert's testimony must assist the trier of fact." *Id.* at 244.

The Third Circuit interprets the second requirement—also known as the "reliability" prong—"to mean that an expert's testimony is admissible so long as the process or technique the expert used in formulating the opinion is reliable." *Id.* at 244, 247 (internal quotation marks omitted). When undertaking the analysis, "[t]he focus, of course, must be solely on principles and methodology, not on the conclusions that they generate." *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 595 (1993). Accordingly, the appropriate inquiry is not "which opinion has

the best foundation, but rather whether any particular opinion is based on valid reasoning and reliable methodology.” *Kannankeril v. Terminix Int’l, Inc.*, 128 F.3d 802, 806 (3d Cir. 1997), *cited with approval in Pineda*, 520 F.3d at 243-44, 247-48. Further, “[t]he analysis of the conclusions themselves is for the trier of fact when the expert is subjected to cross-examination.” *Id.* at 807.

In assessing reliability, “[t]he evidentiary requirement . . . is lower than the merits standard of correctness.” *Pineda*, 520 F.3d at 247 (alteration in original) (internal quotation marks omitted). Moreover, the party offering the expert testimony “need[s] to demonstrate by a preponderance of evidence only that [the expert’s] opinion [is] based on ‘good grounds.’” *Kannankeril*, 128 F.3d at 807 (internal quotation marks omitted).

B. AUO Does Not Dispute that Dr. Kmetz’s Methodology for Testing the AUO Accused Products is Reliable Under *Daubert*

Notably, AUO does not actually dispute the reliability of Dr. Kmetz’s method for identifying the presence of eigen-axes in the AUO accused products. Nor could AUO reasonably do so, as his method is consistent with industry practice, with which AUO’s own expert Dr. Yeh agrees, and is consistent with Dr. Yeh’s own methodology. In fact, AUO’s Motion ignores that nowhere in his rebuttal reports on infringement did Dr. Yeh take any issue with Dr. Kmetz’s underlying methodology. AUO thus has no basis on which to bring its Motion.

Dr. Kmetz’s methodology is consistent with the principles discussed in the publication “Polarization and Polarimetry” from the National Institute of Standards and Technology (“the NIST paper”). (See Ex. D (AP00036234 – AP36258, *cited in* Ex. B at 18).) That paper makes clear that “eigenaxes can be identified by rotating the retarder [i.e., the liquid crystal cell] between crossed polarizers until the transmittance is minimized.” (Ex. D at AP00036245.) Indeed, Dr. Yeh agreed that eigen-axes can be identified in this manner. (Ex. E at 185:12-188:01

(discussing Yeh Ex. 12 (AP00036234 – AP36258, attached hereto as Ex. D) and “agree[ing] that this statement in general is correct”).) Dr. Yeh further acknowledged that darkness is indicative of the presence of eigen-axes. (Ex. E at 214:13-216:11.)

All of the AUO accused products use a well-known liquid crystal alignment structure called Multidomain Vertical Alignment (“MVA”). (Ex. A ¶¶ 93-105.) To confirm that the MVA panels in the AUO accused products have eigen-axes, Dr. Kmetz removed the polarizers from the panels and placed them between the crossed polarizers of a microscope. (Ex. A ¶¶ 117-19.) Dr. Kmetz then oriented each panel so that the microscope’s polarizers lay along the same axes as the original polarizers at 0 and 90 degrees, thus effectively replacing the original polarizers with those of the microscope. (Ex. A ¶ 120 & Ex. 8 thereto.) As expected, the panels were brightest when the voltage was highest, as they would have been with their original polarizers. (Ex. A ¶¶ 117-120 & Ex. 8 thereto.)

Dr. Kmetz then rotated the microscope by 45 degrees, so that the microscope’s polarizers were oriented to coincide with the expected eigen-axes at 45 and 135 degrees. (Ex. A ¶ 121.) This is the angle at which the eigen-axes were expected to be found given that this is the angle at which the fast and slow axes are clearly shown to be in AUO’s own documents that describe the MVA structure of the accused AUO products. (Ex. A ¶¶ 93-97). This reorientation was the only difference between the first and second tests. As a result of rotation to 45 degrees, the panel became darker in the center of the domains, where the electric fields and liquid crystal alignments are most uniform. (Ex. A ¶¶ 123-26 & Ex. 8 thereto; Ex. F at 52:14-53:08.) The darker regions in the center of the domains are evidence of the presence of eigen-axes at 45 and 135 degrees. (Ex. A ¶¶ 123-26.)

AUO does not dispute that Dr. Kmetz’s use of the above method based on industry

principles is reliable. Dr. Kmetz's testing of the AUO accused products meets the reliability requirement under *Daubert*, and his testimony regarding his conclusions based thereon is thus admissible. Accordingly, AUO's Motion should be denied on this ground alone. *See Pineda*, 520 F.3d at 247; *Kannankeril*, 128 F.3d at 807.

C. AUO's Arguments Disputing Dr. Kmetz's Conclusions Cannot Support a Daubert Motion and Are In Any Event Wholly Without Merit

As AUO plainly does not dispute Dr. Kmetz's methodology, its Motion offers arguments that do no more than merely disagree with Dr. Kmetz's infringement conclusions drawn from his testing. Such arguments that focus not on "principles and methodology" but on the "conclusions that they generate," however, cannot support a motion to exclude under *Daubert*. 509 U.S. at 595; *see also Kannankeril*, 128 F.3d at 807. As noted above, this ground alone warrants denial of AUO's Motion. *Pineda*, 520 F.3d at 247.

Nevertheless, Apeldyn responds below to AUO's arguments, which in any event ignore fundamental scientific principles and are without merit. Notably, AUO also filed a motion for summary judgment that included some of these very same flawed arguments. For the same reasons stated both herein and in Apeldyn's opposition to the summary judgment motion,⁴ AUO does not have any basis on which to move for summary judgment or to seek to preclude Dr. Kmetz's testimony. Indeed, it is telling that, in pursuing both this *Daubert* motion and its summary judgment motion, AUO must resort to mere attorney arguments that are not supported by even its own expert.

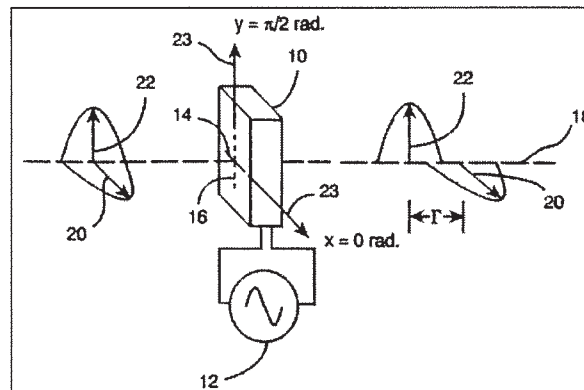
⁴ Apeldyn incorporates by reference its response to AUO's motion for summary judgment of non-infringement (D.I. 532).

1. Dr. Kmetz's Testing Established That the AUO Accused Products Have Two, Orthogonal Eigen-Axes

Dr. Kmetz's testing confirmed that the accused AUO products have two, orthogonal eigen-axes. AUO's assertions otherwise—for which AUO offered no support—ignore fundamental scientific principles and constitute no more than attorney argument that oversimplifies complex issues more appropriately discussed by experts knowledgeable in the area. Indeed, it is telling that nowhere in his rebuttal reports did Dr. Yeh ever raise the “single axis” argument that AUO now makes. To the contrary, Dr. Yeh's own conclusions on this point are consistent with those of Dr. Kmetz.

a. AUO's Arguments Ignore Fundamental Principles of Physics and the Inherent Structure of an MVA Cell

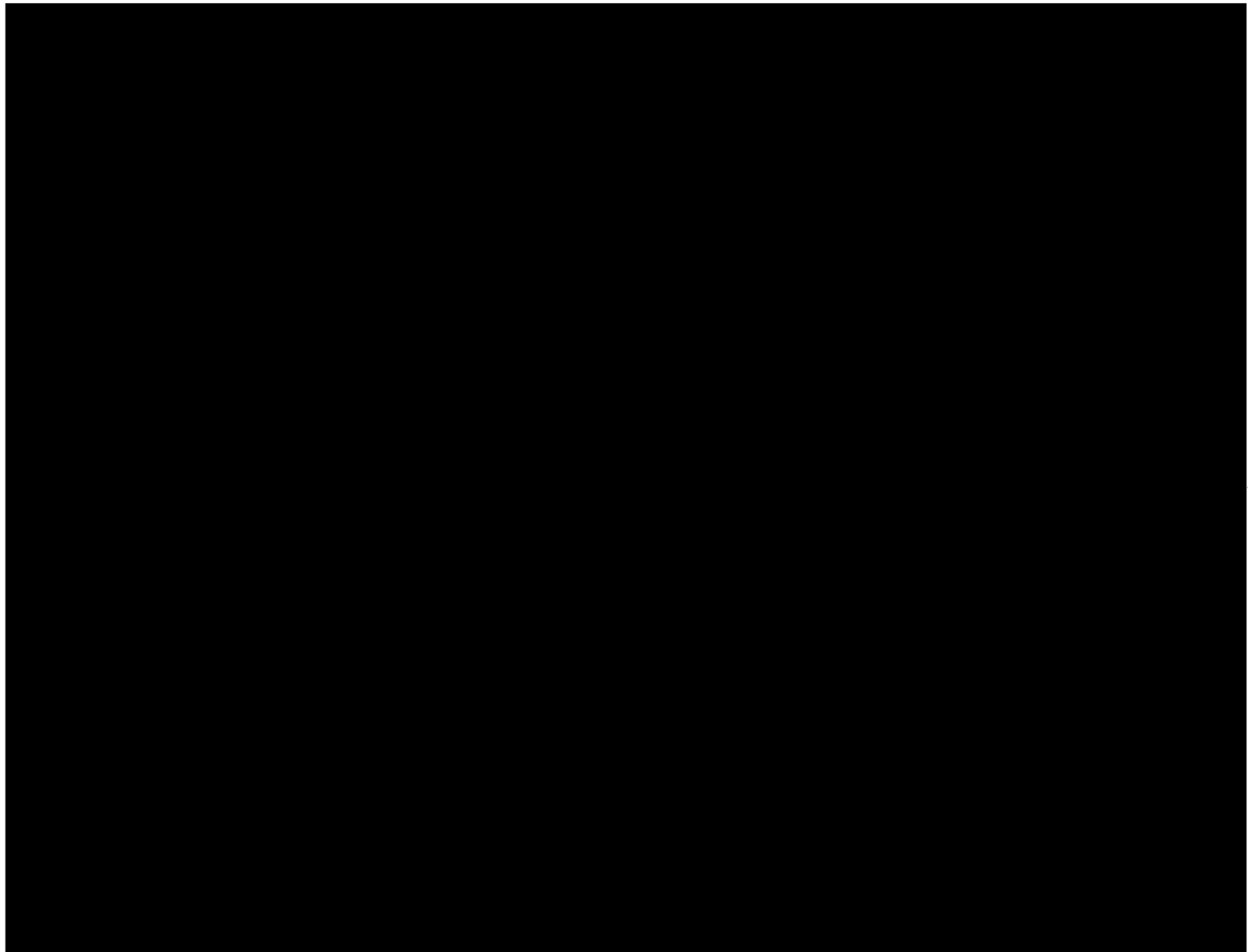
Inherent in Dr. Kmetz's testing and analyses are basic principles of light and the structure of the accused MVA products. Polarized light can be represented as the sum of two linearly polarized components of light that are orthogonal to one another. (Ex. A ¶¶ 43-45.) Figure 1 of the '382 patent, reproduced in Dr. Kmetz's report and again below, shows that light components 20 (at 0 degrees) and 22 (at 90 degrees) are linearly polarized along respective eigen-axes 23 and orthogonal to one another. (Ex. A ¶¶ 43-45.)



As Dr. Kmetz explained, the “two components of [polarized] light are initially of equal magnitude and in phase because they add up to the incident, linearly polarized light, which

oscillates in a plane 45 degrees with respect to the two [eigen-]axes 23.” (Ex. A ¶ 45.) AUO has never disputed this fundamental point.

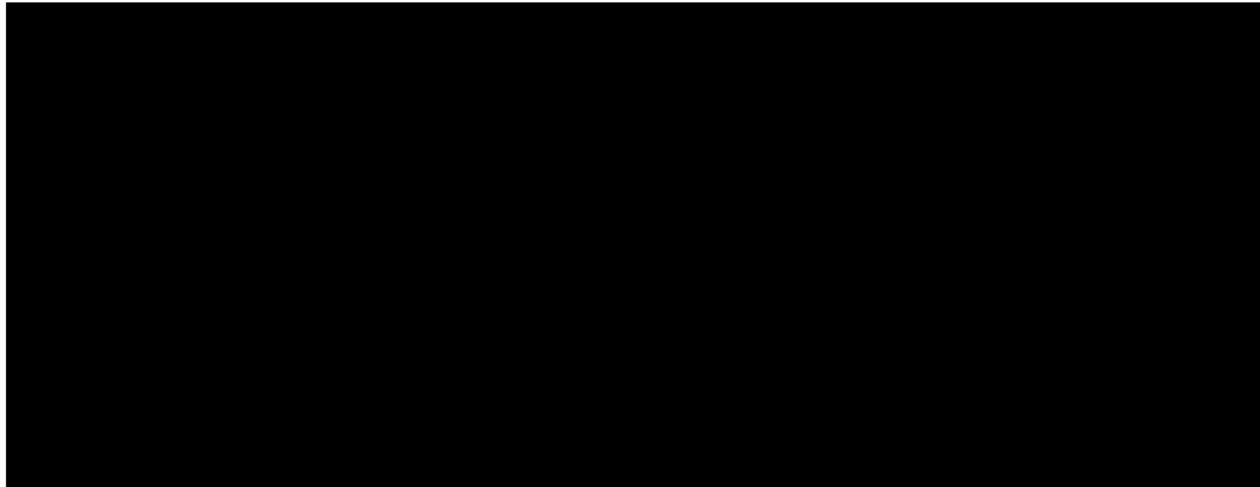
As noted above, all of the accused AUO products use MVA. (Ex. A ¶¶ 98-105.) For an MVA cell to operate, it must have the capability of retarding the two components of light linearly polarized along the two eigen-axes. (Ex. A ¶ 240.) To retard the two components, those components must coincide with two eigen-axes. (Ex. A ¶¶ 40, 93-97.)



Eigen-axes have the property that incident light that is linearly polarized along such an axis will remain linearly polarized and exit the cell along that same axis independent of the applied voltage. (Ex. A ¶ 41 (citing the ‘382 patent).) Accordingly, in a liquid crystal cell having

the MVA structure, light that is linearly polarized along the eigen-axes will coincide with the fast and slow axes of the cell and remain linearly polarized through the cell.⁵

b. Dr. Kmetz's Testing Demonstrated the Presence of a First and Second Eigen-Axis



Even if one were to consider that Dr. Kmetz demonstrated the presence of just one eigen-axes at 45 degrees, as a matter of the basic principles of light and the structural properties of an MVA cell, the presence of an eigen-axis at 45 degrees undeniably demonstrates the presence of a second eigen-axis orthogonal to the first (i.e., at 135 degrees). Dr. Kmetz observed that the accused AUO products are able to retard the two components of light, i.e., the brightness of the products can be adjusted by changing the retardance between these two components of linearly polarized light. (Ex. A ¶¶ 130-41.) Accordingly, the two components of light passing through the accused AUO products necessarily must be coinciding with two eigen-axes present in the products. (Ex. A ¶¶ 42-44, 93-97, 118.)

These two eigen-axes are necessarily orthogonal to one another. As discussed above, the

⁵ This description does not mean, however, that eigen-axes are properties of an individual liquid crystal molecule, as AUO argues in its claim construction briefs. Rather, the eigen-axes are properties of the liquid crystal cell as a whole, as explained in the '382 patent (Ex. A at Ex. 5, 3:60-4:42, Figure 1) and Apeldyn's claim construction briefing (D.I. 551 at 2).

two components of light pass through the MVA cell along the fast and slow axes within a domain, which axes are orthogonal to one another. (Ex. A ¶¶ 93-96, 121.) The first and second eigen-axes necessarily coincide with the first and second components of light, which pass through at 90 degrees to one another. (Ex. A ¶¶ 42-43, 117-29.) Thus, the accused products necessarily have two eigen-axes that are orthogonal and present at 45 degrees and 135 degrees.

Dr. Kmetz's testing thus supports his conclusion that the accused AUO products have first and second eigen-axes that are orthogonal to one another. AUO's unsupported arguments to the contrary ignore not only fundamental principles of science, but also the conclusions drawn by its own expert that eigen-axes inherently exist in orthogonal pairs. Indeed, in his expert report on non-infringement as to AUO, Dr. Yeh acknowledged that eigen-axes are orthogonal in a liquid crystal display element. (Ex. G at 45-46 & Figure 2 ("For the purpose of retarder application, the slow axis in this case is parallel to the director. The fast axis is perpendicular to the director. They are illustrated in Figure 2.").)

Further, in Figure 3(a) of the appendix to his report, Dr. Yeh shows that "a beam of linearly polarized light will remain linearly polarized over the entire transverse cross section of the beam." (Ex. G at 47-48.) Dr. Yeh explained that "[t]his is true when the polarization state is parallel to an eigen axis which is the common direction of LC director uniformly distributed in the xyplane." (Ex. G at 48.) Significantly, although Figure 3(a) illustrates testing for just one eigen-axis, Dr. Yeh's label for this figure makes clear that, based on the test, "[a] set of eigen-axis exist." (Ex. G at 47 (emphasis added).)

Dr. Yeh similarly identified the presence of orthogonal eigen-axes at 45 degrees and 135 degrees in an MVA cell in his non-infringement report as to CMO. (Ex. H ¶¶ 119-22 & Figures 26(a), (b).) This was not surprising, as Dr. Kmetz likewise observed that "the AUO and the

CMO MVA panels exhibited similar eigen-axis effects, even though they were made by different manufacturers.” (Ex. A ¶¶ 123-29.) This consistency demonstrates that the eigen-axes are inherent in the design of an MVA cell, as Dr. Kmetz explained in his report. Thus, AUO’s own expert recognizes that the presence of one eigen-axis necessarily demonstrates the presence of a second eigen-axis.

Thus, AUO’s “single axis” argument—which is contrary to the opinions of its own expert, fundamental science, and common sense—must fail. Dr. Kmetz’s conclusion from reliable testing that the accused AUO products have two, orthogonal eigen-axes is based on good grounds. Accordingly, AUO’s Motion should be denied. *See Pineda*, 520 F.3d at 247; *Kannankeril*, 128 F.3d at 807.

c. Additional Testing by AUO’s Own Expert—Which AUO Withheld—Further Confirms Dr. Kmetz’s Conclusions

To confirm further that light minimization in the accused AUO products was an effect caused by the presence of eigen-axes, Dr. Kmetz also compared the MVA panels to a twisted nematic (“TN”) panel (Ex. A ¶¶ 117-22, 127-28), which Dr. Yeh agreed does not have eigen-axes (Ex. E at 192:07-193:14). As expected, the TN panel did not become darker like the MVA panel as the panel was rotated under the microscope because a TN cell (unlike an MVA cell) has no axes along which light that is linearly polarized will remain linearly polarized as it passes through the cell. (Ex. A ¶¶ 101-102, 127-129 & Ex. 8 thereto.) That distinction confirms that the light minimization in the MVA panels was a polarization effect caused by the presence of eigen-axes.

Notably, AUO actually withheld from Apeldyn additional testing conducted by Dr. Yeh that confirmed this point. To Apeldyn’s surprise, during his June 22-23, 2011 deposition Dr. Yeh admitted that he had similarly tested TN panels and obtained the same results as Dr. Kmetz,

namely, “in virtually all samples that we did it was always transmission” (i.e., the TN panels were bright and not dark). (Ex. E at 69:17-76:12, 322:21-323:21, 324:18-325:11.) This testing was not disclosed in Dr. Yeh’s May 20, 2011 rebuttal report on infringement, nor did AUO ever indicate that such testing had occurred.

Apeldyn promptly requested that Dr. Yeh’s testing data be produced, but AUO inexplicably asserted that such testing was not relevant. (Ex. I.) Only after repeated demands did AUO finally produce the test data, waiting to do so until July 14, 2011—nearly two months after Dr. Yeh’s rebuttal was served, nearly one month after his deposition, and just two business days before Apeldyn’s response to AUO’s motion for summary judgment was due. (Ex. I.) AUO’s failure to disclose Dr. Yeh’s testing and subsequent delay in producing that data deprived Apeldyn of key discovery and the ability to question Dr. Yeh on this test data.⁶

2. Dr. Kmetz’s Testing Established That the Accused AUO Products Have Eigen-Axes Independent of the Voltage Applied

Contrary to AUO’s assertion—for which AUO again offered no support—it was not necessary for Dr. Kmetz to test the accused AUO products at voltages lower than the highest voltage to demonstrate that light linearly polarized along the eigen-axes remains linearly polarized independent of the applied voltage. It is telling that nowhere in his rebuttal reports did Dr. Yeh ever raise the “single voltage” argument that AUO now makes. Indeed, Dr. Kmetz’s testing at the highest voltage level was clearly sufficient to support his conclusions due to the properties of the MVA cell structure and as a matter of logic.

Light that is linearly polarized along the eigen-axes does not twist (i.e., the polarization

⁶ AUO has repeatedly disregarded its discovery obligations and has already been sanctioned twice for failing to produce prepared Rule 30(b)(6) witnesses (D.I. 481; D.I. 562) and failing timely to disclose Dr. Yeh’s opinions as to certain prior art references (D.I. 464 at 6-13, 15).

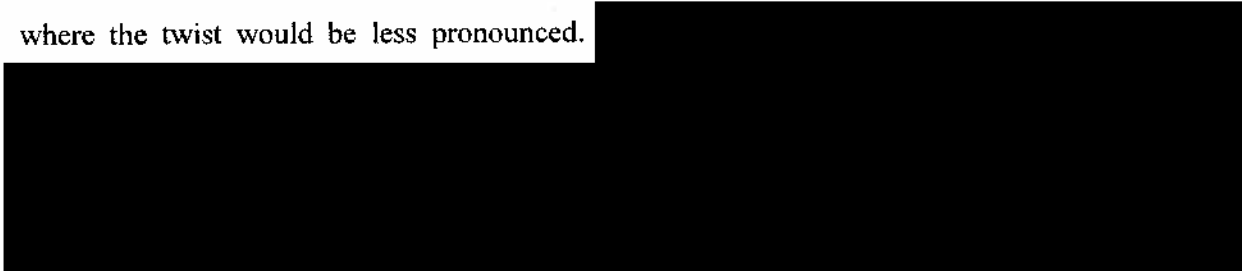
state remains fixed) as it moves through the cell when an electric signal, or voltage, is applied. (Ex. A ¶ 124; *see also* Ex. F at 162:8-163:18.) This is because the liquid crystal molecules “tip” or “tilt” away from the vertical in substantially the same direction and at a nearly uniform angle when voltage is applied, as opposed to tilting in different directions. (Ex. A ¶¶ 91, 94.) This is a fixed property of the MVA cell inherent in the structure of the cell.

The amount of voltage applied to the MVA cell affects the electric field, which in turns affects the tilt of the liquid crystal molecules and thus the brightness of the cell. (Ex. A ¶ 91.) More specifically, the higher the voltage applied, the greater the “tilt” of the molecules toward the horizontal, and the brighter the subpixel. (Ex. A ¶ 91.)

This correspondence between the tilt of the liquid crystal molecules and the applied voltage is significant in demonstrating that light linearly polarized along the eigen-axes remains linearly polarized independent of the applied voltage. The effects of an applied voltage would be greatest when the maximum voltage is applied. Thus, if the alignment structure of the liquid crystal cell is such that all the molecules “twist” about a vertical axis (as they do in a TN cell but not an MVA cell), then this twist would be the most pronounced at the highest voltage (or brightness) level. (Ex. A ¶¶ 91, 106-09, 141; Ex. G at 19 (“At the mid-point of the cell, the LC director exhibits the maximum tilt (or twist) due to the applied electric field.”).) As a result of this twist, even at the highest voltage level, light would be able to pass through the cell, leaving no dark regions within the domains of the cell. (Ex. A ¶¶ 106-109, 123-29 & Ex. 8 thereto.)

Dr. Kmetz tested the accused AUO products at the highest voltage level (i.e., brightest level or “white” state) and observed dark regions within the domains of the cell, thus evidencing that the alignment of the liquid crystal molecules in the products does not twist. (Ex. A ¶¶ 120, 123-29 & Ex. 8 thereto.) These dark regions cannot be explained by a twisting of all of the

molecules, as in a TN cell, because TN cells did not exhibit any dark regions in Dr. Kmetz's (or Dr. Yeh's) experiments. Given that no twist was observed at the level where the twist would be the most pronounced, it logically follows that no twist would be observed at lower voltage levels, where the twist would be less pronounced.



By way of analogy, if a bridge crossing a river is able to support the weight of a freight train and does not collapse when the train moves across, it logically follows that the bridge likewise can support a Prius and will not collapse when the Prius crosses. Indeed, it would be redundant to repeat a "test" of the bridge's stability using the Prius when the far more rigorous test clearly showed that the bridge could also bear the lighter weight.

The same is true here. AUO's argument, therefore, makes little sense in the context of testing for the presence of eigen-axes in an MVA cell and drawing conclusions therefrom. Dr. Kmetz reasonably concluded based on reliable testing that the accused AUO products have eigen-axes independent of the voltage applied. Accordingly, AUO's Motion should be denied. *See Pineda*, 520 F.3d at 247; *Kannankeril*, 128 F.3d at 807.

3. Dr. Kmetz's Observations and Photographs are Sufficient to Confirm the Presence of Eigen-Axes in the Accused AUO Products

Contrary to AUO's assertion, Dr. Kmetz did not have to take actual measurements for his testing to demonstrate the presence of eigen-axes in the accused AUO products, and his observations and photographs are plainly sufficient to confirm his findings. It is telling that Dr. Yeh in his deposition indicated that there may be eigen-axes present based on photographs and was unable to deny categorically the presence of eigen-axes based on photographic information

alone.⁷ (Ex. E at 214:13-216:11.) Moreover, AUO's argument relies on the erroneous premise that "[t]he existence of an eigen-axis would result not just in relative darkness, but no transmission"—a contention that is not only inconsistent with industry standards, but also contrary to the testimony of AUO's own expert.

As discussed *supra*, the NIST paper makes clear that "eigenaxes can be identified by rotating the retarder [i.e., the MVA cell] between crossed polarizers until the transmittance is *minimized*," (AP00036245 (emphasis added)), just as Dr. Kmetz did (Ex. A ¶¶ 117-22). Dr. Yeh has agreed that eigen-axes can be identified in this manner. (Ex. E at 185:12-188:01 (discussing Yeh Ex. 12 (AP00036234 – AP36258, attached hereto as Ex. D)).) Significantly, nowhere does the NIST paper state that one may conclude eigen-axes are present only where "no transmission" is observed. In fact, Dr. Yeh even agreed that "minimized" in the NIST paper includes *more than* just zero (or a complete lack of transmittance). (Ex. E at 187:05-09.)

AUO's premise that "no transmission" is required to conclude that eigen-axes are present is thus wholly without merit. Consequently, AUO's argument that Dr. Kmetz's observations and photographs are inadequate to confirm such a presence absent actual measurements of the light transmitted necessarily fails. Indeed, not only is that argument based on the erroneous "no transmission" premise, but it also ignores that the NIST paper nowhere restricts how one may confirm the point at which "the transmittance is minimized," much less dictates that actual measurements are the only means for doing so.

AUO further ignores that photographs taken by Dr. Kmetz and Dr. Yeh in connection

⁷ To the extent AUO, in making its argument, relies on statements by Dr. Yeh that he believes actual measurements would have been "probably more scientific," AUO ignores that the appropriate inquiry is not what AUO may perceive to be "better," but instead whether Dr. Kmetz's opinion "is based on valid reasoning and reliable methodology." See *Kannankeril*, 128 F.3d at 806. For the reasons stated herein, Dr. Kmetz's opinion plainly meets this standard.

with testing of a TN panel demonstrate the marked differences between a TN panel (which lack eigen-axes) and MVA panels (which have eigen-axes). Both Dr. Kmetz and Dr. Yeh tested for the transmittance of light in TN panels.⁸ (Ex. A ¶¶ 117-22, 127-28; Ex. E at 319:22-326:18.) Both Dr. Kmetz's and Dr. Yeh's photographs of a TN panel clearly show that there was no minimum in light transmission or dark regions present at any orientation of the polarizers, as would have occurred if the TN panel had eigen-axes. (Ex. A ¶¶ 127-28 & Ex. 8 thereto; Ex. E at 319:22-326:18; Ex. J.) In contrast, the photographs of AUO's MVA panels that were tested by Dr. Kmetz and Dr. Yeh clearly show a minimum in light transmission and the existence of many dark regions at 45 degrees, and thus the presence of eigen-axes. (Ex. A ¶¶ 117-29 & Ex. 8 thereto; Ex. G at Ex. 3 thereto.)

Dr. Kmetz's photographs of TN and MVA panels are thus more than adequate to confirm the presence of eigen-axes. (Ex. A ¶¶ 117-29 & Ex. 8 thereto.) Given that Dr. Yeh's photographs confirm the same conclusions, it is disingenuous for AUO to assert otherwise. The testimony of Dr. Yeh cited by AUO only further proves this point, as he agreed that Dr. Kmetz's photographs

Moreover, it is notable that, as discussed *supra*, AUO withheld Dr. Yeh's photographs and measurements of a TN panel, which provide further evidence that photographs are sufficient to demonstrate the presence of eigen-axes.

In any event, it bears noting that Dr. Kmetz's conclusions regarding the presence of eigen-axes are the same as those reached by Dr. Yeh, who measured the light transmittance. To be sure, in his non-infringement report as to CMO, Dr. Yeh identified the presence of eigen-axes

⁸ Notably, Dr. Yeh's tests of the TN panel are the same tests that, as discussed *supra*, AUO concealed from Apeldyn and Dr. Kmetz throughout expert discovery.

at 45 degrees and 135 degrees in an MVA cell based on his measurements of the transmittance. (Ex. H ¶¶ 119-22 & Figures 26(a), (b).) The consistency of these results confirms that Dr. Kmetz's visual observations and photographs are sufficient.

Thus, Dr. Kmetz's photographs are plainly sufficient to confirm the presence of eigen-axes in the accused AUO products. While AUO may prefer that actual measurements have been taken, such an argument cannot and does not support a motion under Daubert, and is instead a matter to be weighed by the trier of fact. *See Kannankeril*, 128 F.3d at 807. Accordingly, AUO's Motion should be denied. *See Pineda*, 520 F.3d at 247; *Kannankeril*, 128 F.3d at 807.

D. Dr. Kmetz May Testify Regarding AUO's Infringing Activities

Dr. Kmetz may properly offer supporting background information regarding AUO's infringing activities, as discussed in his expert report on infringement (Ex. A ¶¶ 53-83⁹) and rebuttal report as to validity (Ex. B ¶¶ 201-29). AUO's argument to the contrary ignores the nature and purpose of Dr. Kmetz's testimony on this issue, as well as fundamental rules of evidence.

AUO disregards that although Dr. Kmetz is not being offered as an expert on "sales and marketing" generally, his reference to AUO's infringing activities in his reports is nevertheless relevant to infringement and validity. Indeed, with respect to validity, AUO's infringing activities are objective indicia of non-obviousness, namely as evidence of secondary considerations. *See Crocs, Inc. v. Int'l Trade Comm'n*, 598 F.3d 1294, 1310 (Fed. Cir. 2010). In particular, those activities demonstrate that the accused AUO products incorporating the infringing technology have been commercially successful and that AUO actively promotes the

⁹ Apeldyn notes that although AUO included paragraphs 53-54 in its citation to Dr. Kmetz's infringement report, those paragraphs relate to the effects of slow response times. (Ex. A ¶¶ 53-54.)

infringing technology when marketing its products. (Ex. B ¶¶ 201-29.) AUO has completely ignored such secondary indicia in its own reports.

With respect to infringement, the activities provide relevant background showing that AUO has sold and marketed the accused products in the United States. (Ex. A ¶¶ 53-83.) The activities thus show that AUO has directly and indirectly infringed the '382 patent, in violation of 35 U.S.C. § 271. Indeed, if Dr. Kmetz had not included such evidence of AUO's infringing activities in his report, AUO likely would have tried to argue that he did not include sufficient information to support his inference.

AUO's infringing activities thus are directly relevant to and fall within the purview of Dr. Kmetz's expert testimony. The activities further are of the type that would typically be relied upon by experts in forming inferences that an accused infringer directly and indirectly infringes the patent-in-suit. Accordingly, Dr. Kmetz's testimony as to these activities is permissible. *See* Fed. R. Evid. 703.

In any event, AUO's argument that its witnesses' testimony is hearsay contradicts basic rules of evidence. To be sure, any such testimony offered against AUO is plainly not hearsay at all because it constitutes an admission by a party-opponent. *See* Fed. R. Evid. 801(d)(2). AUO's reliance on *United States v. Mejia*, 545 F.3d 179 (2d Cir. 2008), in arguing otherwise is distinguishable, as in that case the hearsay testimony merely repeated information without offering any synthesis thereof. 545 F.3d at 197.

Accordingly, Dr. Kmetz may testify regarding AUO's infringing activities in the United States. AUO's Motion should therefore be denied. *See Pineda*, 520 F.3d at 247; *Kannankeril*, 128 F.3d at 807.

IV. CONCLUSION

For the reasons stated herein, Apeldyn respectfully requests that the Court deny AUO's Motion.

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